

CLAIMS

1. A laminated ceramic substrate formed by laminating ceramic layers each having a circuit element pattern formed on
5 a surface thereof, the laminated ceramic substrate comprising a side electrode in which a side edge electrode layer formed on a side edge portion of the ceramic layer overlaps with and connects to a side edge electrode layer formed on a side edge portion of another ceramic layer directly above and/or
10 directly below the former ceramic layer, the side edge electrode layer comprising a parallel wall unexposed and approximately parallel to a side surface of the laminated ceramic substrate and a perpendicular wall approximately perpendicular to the side surface of the laminated ceramic
15 substrate, a length L_a of the parallel wall and a depth L_b of the parallel wall from the side surface of the laminated ceramic substrate having a relationship of $L_a > L_b$.
2. A laminated ceramic substrate according to claim 1,
wherein the parallel wall and perpendicular wall are connected
20 by a corner portion with an R-shape in which R is greater than 0.02 mm.
3. A laminated ceramic substrate according to claim 1 or 2,
wherein a sum of depths of opposite side edge electrode layers partially differs with respect to a laminated direction.

4. A manufacturing method for a laminated ceramic substrate formed by laminating ceramic layers each having a circuit element pattern formed on a surface thereof, the manufacturing method for the laminated ceramic substrate comprising

5 a step of providing a through hole for a side electrode including at least four straight-line portions in a green sheet to become a ceramic layer.

5. A manufacturing method for a laminated ceramic substrate according to claim 4, wherein the through hole for a side
10 electrode provided in at least one green sheet differs in size from a through hole for a side electrode provided in another green sheet.

6. A manufacturing method for a laminated ceramic substrate formed by laminating ceramic layers each having a circuit
15 element pattern formed on a surface thereof according to claim 4 or 5, the manufacturing method for the laminated ceramic substrate comprising:

a first step of preparing a plurality of green sheets to become ceramic layers and providing in a required number of
20 the green sheets thereof a through hole for a via hole to become a circuit element pattern and a through hole for a side electrode including at least four straight-line portions;

a second step of filling the through hole for a via hole and through hole for a side electrode of the plurality of

green sheets after the first step with a conductive material;

a third step of printing a circuit element pattern with the conductive material on each surface of the plurality of green sheets after the second step;

5 a fourth step of laminating the green sheets after the third step and integrating the green sheets by heat press or other methods to obtain a green sheet laminated body;

a fifth step of dividing the green sheet laminated body after the fourth step to obtain a green sheet laminated body
10 chip; and

a sixth step of firing the green sheet laminated body chip after the fifth step to obtain the laminated ceramic substrate.

7. A manufacturing method for a laminated ceramic substrate
15 according to claim 4, 5, or 6, comprising:

a fifth step of firing the green sheet laminated body after the fourth step to obtain a mother laminated ceramic substrate; and

a sixth step of dividing the mother laminated ceramic
20 substrate after the fifth step to obtain the laminated ceramic substrate.

8. A manufacturing method for a laminated ceramic substrate according to claim 4, 5, 6, or 7, wherein the second step of filling the through hole for a via hole and through hole for a

side electrode with the conductive material is performed simultaneously with the third step of printing the circuit element pattern with the conductive material on each surface of the green sheets.